
Sunk Cost Effects on Consumer Choice

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Abstract

This research reports results from an experiment on the effect of sunk costs and brand violations on consumer choice. Participants were randomly assigned to one of six hypothetical scenarios where sunk cost magnitude, consumer-brand relationship violation, and availability of product alternatives were experimentally manipulated. Consumer choice, consumer loyalty, and consumer-brand relationship strength were assessed upon completion of the manipulation. There was evidence that high sunk cost manipulations resulted in attitudinal and behavioral change across the consumer-brand relationship and product alternative dimensions. This research adds to a literature on factors influencing consumer decision making and the consumer-brand relationship. Future directions are discussed.

Key words: Sunk Costs,
Consumer-Brand Relationship,
Consumer Attitude



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INTRODUCTION

Many decision making models function under the assumption that people are purely rational decision makers. However, there is growing body of literature to suggest that is specious (Magalhaes & White, 2014). Therefore, from a consumer behavior perspective, understanding when and why decisions become irrational is of importance at both the consumer and market level. In recent years, researchers have studied a variety of decision making topics in this arena including the sunk cost effect, framing effect, endowment effect, and the status quo bias, among others. The focus of this paper is the sunk cost effect.

It has been noted that decision makers demonstrate the sunk cost effect when they continue to transfer resources into a project or situation even though future utility would be increased by terminating the plan or even choosing a less inferior alternative (Thaler, 1980). Sunk costs are viewed as opportunity outlays that have already been incurred and cannot be recovered. Since these costs cannot be reactivated it is posited that they should not have any impact when attempting to make decisions about future consumer behaviors. This is because they do not impact the costs and benefits pertaining to the new decision. For individuals, it appears that this is a straightforward and avoidable situation. However, consumers and organizations alike often fall victim to the irrational decision making process surrounding sunk costs.

The extant literature on the sunk cost effect abundantly depicts the irrational behavior in various scenarios such as finance (Garland, 1990) and personal or social behavior (Arkes & Blumer, 1985; Garland & Newport, 1991). It is interesting that the sunk cost effect is even found in animal research using pigeons (Magalhaes & White, 2014). In this research, the sunk cost effect was reported as the pigeons' consistency to choose the food source that was preceded with higher levels of effort. These results were consistent with those of humans (Magalhaes & White, 2014). Other examples of sunk cost scenarios range on a continuum from minor to major sunk cost infractions. One such example is the continued investment into an old car versus buying a new one, and thereby eschewing the possibility of saving money over a prolonged period of time. Another example might include consumers' persistence to watch a terrible movie as a result of time and monetary resources already invested in this experience. Other scenarios could include decisions related to finances, social behavior, and one's career. It is robust topic with many avenues for exploration.

Overall, there is general agreement among decision making researchers that sunk cost effects do occur but there is still debate as to the underlying mechanisms of this phenomenon. For example, in their

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research, Arkes and Blumer (1985) examined traditional economic theory by proposing that the psychological mechanism for this irrational economic behavior is the desire not to appear wasteful. Arkes and Blumer (1985) successfully demonstrated this through a series of several studies and also addressed Kahneman and Tversky's (1979) use of prospect theory to explain the sunk cost effect. In prospect theory, it has been noted that certainty magnifies both positive and negative values. The result of this is that individuals greatly overvalue gains and undervalue losses. More specifically, Kahneman and Tversky (1979) found in a variety of hypothetical gambling and insurance decision making scenarios that individuals often overweight outcomes that are considered absolutes, or certainties, in comparison to those that are considered probable. In addition,, to further illustrate this in sunk cost terms Arkes and Blumer (1985) found that participants' reluctance not to complete assigned tasks in their experimental paradigm could be explained as their desire to avoid a result of guaranteed loss. In general, prospect theory accounts for a strong aversion to certain loss but it does not explain the underlying psychological reasoning which accompanies the individual's decision making. Arkes and Blumer (1985) hypothesize that a terminating investment in a project would in turn be an admission that prior money was wasted. Since this admission would be an undesirable outcome they found that it can only be avoided by further investment in order to justify the sensibility of the prior spending.

Arkes and Blumer (1985) made an important contribution to the literature on sunk costs and in the process also raised many more questions. As such, Moon (2001) conducted a study to further examine sunk costs and project completion, the two main conflicting frameworks in understanding why decision makers escalate their commitment to a previously chosen course of action. Participants were exposed to the well-known blank radar plane study where completion of a task is viewed as socially desirable along with a confounding variable. Moon (2001) makes an important distinction between two types of decisions: progress and adoption. Progress decisions are defined as having a temporal element, including a specific beginning and end date whereas adoption decisions involve the choice of whether or not to use or undertake something. A research paradigm exemplifying an adoption decision is when a person must decide whether they will go on one of two ski trips: the first has a greater expense but the second has the potential to be more enjoyable. Similar research studies conducted by Arkes and Blumer (1985) demonstrate completion effects as a conscious choice as well as sunk cost reasoning for the subsequent decisions made in these. More specifically, this research uses theater tickets as a variable of interest with the choice to eat one of two dinners as an outcome; the only difference in this manipulation was the amount of money invested in the event. However, Moon (2001) asserts that there is a need for a focus on progress-related decision dilemmas in order to establish the relationship between completion and sunk costs. It is believed that this understanding will enhance researchers' conceptualization of the sunk cost effect.

Past progress decision studies (Arkes & Blumer, 1985; Garland, 1990; Garland & Newport, 1991) failed to account for completion as a variable in escalation of commitment to a project and therefore did not appropriately manipulate the notion of prior expenditures. As such, this research was vulnerable to multiple interpretations and justifications. Ultimately, Moon (2001) found significant results for both sunk cost and completion effects within a single study and demonstrated a synergistic relationship between sunk costs and completion in situations when both were of high importance. Moon (2001) also found that the sunk cost effect was similar to a marginal utility curve; this called into question the microeconomic assumption made by McCain (1986) that sunk costs are only important in early stages of a project and less so later. Moon (2001) posited that this may be true in terms of a series of decisions being made based on negative information. However, when reflecting on the terms of a single decision regarding a progress completion dilemma it is hypothesized that sunk costs have their greatest effect as the level of completion increases (versus only the early stages). Additional research is needed to better understand the intricacies of these elements of the sunk cost effect.

It might seem difficult to conceive any circumstance in which sunk cost behavior would actually increase overall utility. This is what Bornstein and Chapman (1995) sought to examine in their research. Bornstein and Chapman's research consisted of three potentially rational reasons for committing the sunk cost

fallacy: 1) learning a lesson, 2) punishment for making a bad decision, and 3) the desire to appear to be a consistent decision maker. Through a series of experiments the researchers' results mimicked that of the traditional sunk cost effect seen in much of the literature. That is, individuals were consistent with their original plan when a large investment had been made. This is in contrast to a higher rate of termination when only a relatively small amount had been invested. The main findings were newly discovered reasons for why decision makers may continue with a failed plan. The explanations found to be significant were: the desire to teach the decision maker to be more careful in making future decisions, the importance of lesson learning when the original decision was made carelessly and relatively large resources had been invested, and finally when an adult teacher had the opportunity to teach a lesson to a child (Bornstein & Chapman, 1995).

The aforementioned research studies represent the variability of the sunk cost effect as it is represented in the decision making literature. The range of topics is fascinating yet it is beneficial to explore other subtopics in the realm of consumer behavior. The ability of the sunk cost effect to express itself not only in monetary form but also in time and effort makes for an intriguing variable. On such topic that lends itself to an investigation in the context of sunk costs is the consumer-brand relationship. The relationship between consumers and their brands is complex and it is imperative to look at a variety of factors that might influence the consumers' identification and connection with brands. A profound understanding of these factors will lead to more advanced marketing theories (Fournier, 1998). As such, the purpose of this research is to determine the extent of sunk cost effects as it relates to the consumer-brand relationship in a variety of typical marketing situations.

METHODOLOGY

In this experiment, participants were tested in groups of up to four at a time. One hundred and eight students enrolled in introductory social science and business courses at a university in the United States of America were randomly assigned to one of six conditions: 1) low sunk cost, violation of consumer-brand relationship, no product alternatives for consumer (LVNP); 2) high sunk cost, violation of consumer-brand relationship, no product alternatives for consumer (HVNP); 3) low sunk cost, violation of consumer-brand relationship, product alternatives for consumer (LVP); 4) high sunk cost, violation of consumer-brand relationship, product alternatives for consumer (HVP), 5) low sunk cost, no violation of consumer-brand relationship, product alternatives for consumer (LNVP); and 6) high sunk cost, no violation of consumer-brand relationship, product alternatives for consumer (HNVP). Sunk cost magnitude (low/high), violation of consumer-brand relationship (yes/no), and product alternatives for consumer (yes/no) were experimentally manipulated. As such, a single decision scenario was used for all participants. Differences were based on the aforementioned variables and participants assignment to the six conditions. It followed the paradigm outlined by Garland (1990) in his research on sunk costs and escalation of commitment. More specifically, all groups were asked to read a fictitious news article about a consumer goods brand.. The article was uniform for all participants except for the elements of the manipulated variables. This eliminated the potential for confounds. The fictitious scenario was detailed; it provided information about the brand's recent news, a brief history of the brand, a description of the consumer's investment in the brand, and information about the potential options for the consumer. A manipulation check revealed that participants viewed the news article as believable.

After random assignment to one of the six scenarios, participants were then asked to complete a series of consumer attitude, brand relationship, and behavioral intention measures. All participants completed the measures in the same order. The same type of fast moving consumer goods brand was used in all conditions; the only difference among these six groups was the description of sunk cost magnitude, violation of consumer-brand relationship, and product alternatives for consumer. Therefore, interactive effect of these variables on subsequent consumer attitudes and behaviors could be examined. At the conclusion of the session, the participants were thanked and completely debriefed.

RESULTS

A series of one-way analyses of variance was performed to examine differences among the following six conditions: 1) low sunk cost, violation of consumer-brand relationship, no product alternatives for consumer (LVNP); 2) high sunk cost, violation of consumer-brand relationship, no product alternatives for consumer (HVNP); 3) low sunk cost, violation of consumer-brand relationship, product alternatives for consumer (LVP); 4) high sunk cost, violation of consumer-brand relationship, product alternatives for consumer (HVP), 5) low sunk cost, no violation of consumer-brand relationship, product alternatives for consumer (LNVP); and 6) high sunk cost, no violation of consumer-brand relationship, product alternatives for consumer (HNVP)

For the composite behavioral intention measure, there was a marginally statistically significant difference when comparing the conditions for participants, $F(5, 102) = 2.07, p = .07$. Of note is the finding that participants assigned to the high sunk cost, no violation of the consumer-brand relationship, product alternatives for consumer (HNVP) condition were significantly less likely to leave the brand than those assigned to the low sunk cost, violation of the consumer-brand relationship, product alternatives for consumer (LVP) condition.

For the composite behavioral loyalty measure, there was a statistically significant difference when comparing the conditions for participants, $F(5, 102) = 2.79, p < .05$. Of note is the finding that participants assigned to the high sunk cost, violation of the consumer-brand relationship, product alternatives for consumer (HVP) condition were significantly less likely to remain loyal the brand than those assigned to high sunk cost, no violation of the consumer-brand relationship, product alternatives for consumer (HNVP) condition. In addition, the same pattern was found for the comparison between the low sunk cost, violation of the consumer-brand relationship, no product alternatives for consumer (LVNP) and the high sunk cost, no violation of the consumer-brand relationship, product alternatives for consumer (HNVP) conditions.

For the composite consumer attitude measure, there was a statistically significant difference when comparing the conditions for participants, $F(5, 102) = 4.60, p < .05$. Of note is the finding that participants assigned to the high sunk cost, violation of the consumer-brand relationship, product alternatives for consumer (HVP) condition were significantly less likely to trust the brand than those assigned to low sunk cost, no violation of the consumer-brand relationship, product alternatives for consumer (LNVP) condition. In addition, the same pattern was found for the comparison between the low sunk cost, violation of the consumer-brand relationship, product alternatives for consumer (LVP) and the high sunk cost, no violation of the consumer-brand relationship, product alternatives for consumer (HNVP) conditions. This same pattern was found when comparing the low sunk cost, violation of the consumer-brand relationship, product alternatives for consumer (LVP) and low sunk cost, no violation of the consumer-brand relationship, product alternatives for consumer (LNVP) conditions too.

DISCUSSION

A primary finding from this research was that participants in the HNVP condition were less likely to leave the brand in comparison to those in the LVP condition. It is important to note that in four of the six experimentally manipulated conditions participants were given the option to pursue a product alternative that is overall a more appealing option. The product alternative manipulation was utilized to highlight the possibility of a sunk cost effect. If participants were rational optimizers, as traditional economics posits, then a violation by the brand or a sunk cost will be rendered obsolete in the decision process. Consequently, participants will be more likely to leave the brand in pursuit of a better opportunity. However, the results of this research illustrate clear interferences from variables such as sunk costs and brand violations. A possible cause for participants staying with the brand in condition HNVP is due to the combination of a high sunk cost and absence of a violation by the brand to the consumer-brand relationship. Conversely, participants in the LVP condition were found more likely to leave. Perhaps this can be explained by the combination of a low sunk cost and presence of a violation by the brand to the consumer-brand relationship.

A secondary finding was that participants in the HVP condition were less likely to remain loyal to the brand compared to those assigned to the HNVP condition. This result is likely due to the circumstance whereby there was only one manipulation, the brand violating the consumer-brand relationship. This provides support that a violation by the brand is indeed detrimental to the consumer-brand relationship. This further supports previous research on the topic (Aaker, Fournier, & Brassel, 2004; Steinman, 2012). This same pattern was observed between the LNVP and the HNVP conditions. In addition, participants in the HVP condition were less likely to trust the brand compared to those assigned to the LNVP condition. This also provides evidence of the damaging effects of a brand violation on the consumer-brand relationship. Finally, the same pattern was found when examining difference between the LVP and HNVP conditions as well as LVP and LNVP conditions, respectively.

Overall, these results provide some support for the sunk cost effect. Participants in high sunk cost conditions viewed the brand in less favorable terms, were less likely to leave the brand as their perceptions of the brand might have changed. Even though the dynamics of the consumer-brand relationship might have impacted they remained tied to the brand even when product alternatives were available. It appears that the level of resources already invested is a significant reason for their reluctance to leave their brand, especially after a violation of the consumer-brand relationship. There were consistent results when examining consumer trust and loyalty with the brand following the consumer-brand violation too. The continuation of the original consumer behavior, after making a significant monetary and time investment into the brand, became the focal point even when accounting for other factors examined in this experimental research.

The primary limitation of the current study is that it did not include an actual behavioral outcome variable. However, this is common in decision making research. Hypothetical situations were presented using survey-based research tools. However, the researcher attempted to increase realism by using accurate and representative scenarios, ones that consumers often face in their daily lives. However, the fact that participants were not sacrificing their own monetary and time resources could have influenced the participants' consumer behavior-related decision making. If feasible, it is recommended that future research efforts on sunk cost effects on the consumer-brand relationship address this issue and include behavioral measures based on simulation exercises or direct observation. Future studies should replicate this research using brands across a variety of product classes for reliability purposes. Also, it is recommended that the effect of time and motivation on consumer choice in sunk cost effect paradigms be investigated too. This will provide additional insight into the sunk cost effect as it relates to everyday consumer behavior decision making situations.

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